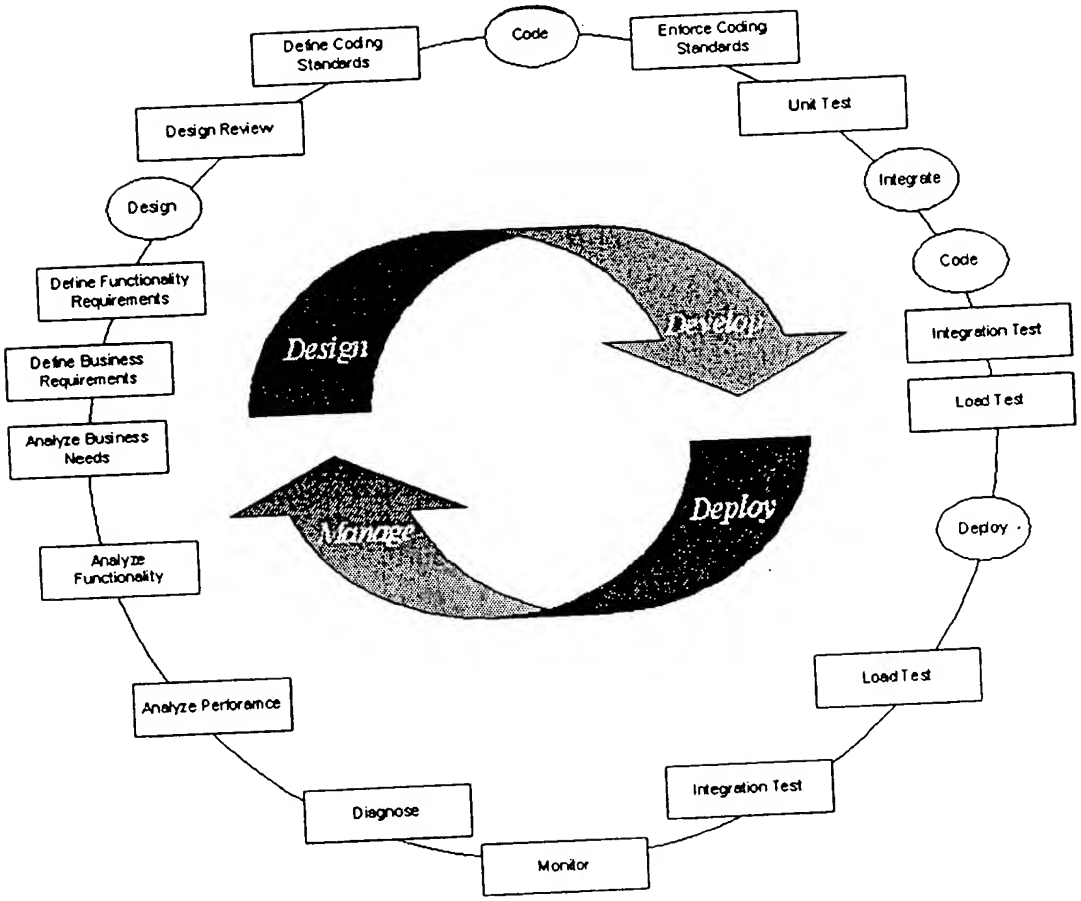

Code
Define Coding Standards
Enforce Coding Standards
Design Review
Unit Test
Design
Integrate
Define Functionality Requirements
Code
Define Business Requirements
Integration Test
Analyze Business Needs
Load Test
Design
Develop
Deploy
Manage
Analyze Functionality
Deploy
Load Test
Analyze Performance
Integration Test
Diagnose
Monitor
Key
= AEP practice that prevents errors
= Development practice that could introduce errors

Fig. 1A

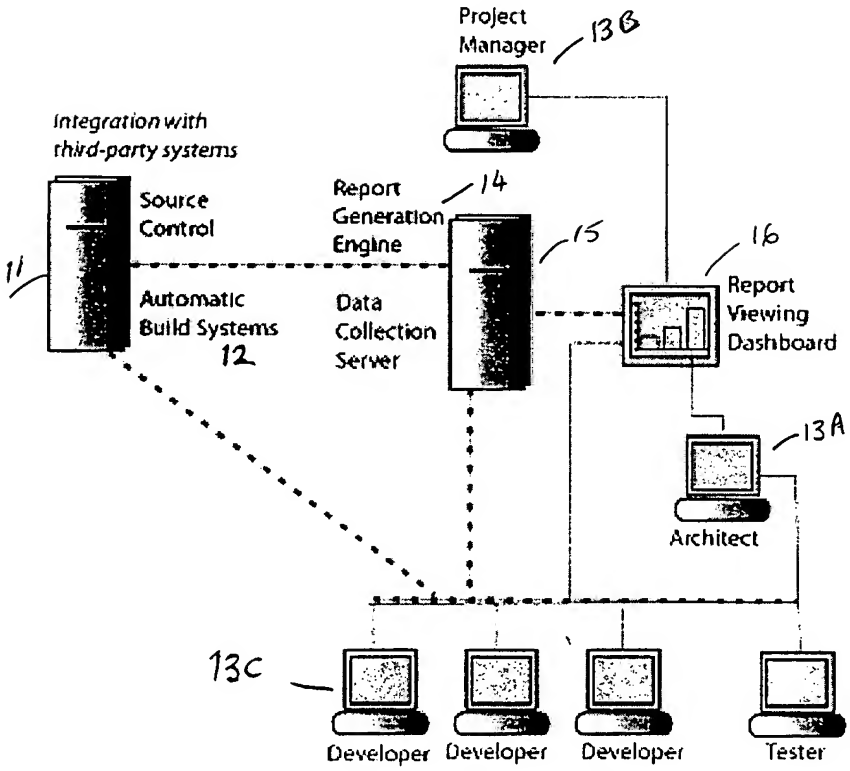

Project Manager
13B
Integration with third-party systems
Source Control
Automatic Build Systems
12
11
Report Generation Engine
14
Data Collection Server
15
16
Report Viewing Dashboard
13A
Architect
13C
Developer
Developer
Developer
Tester

Fig 1B

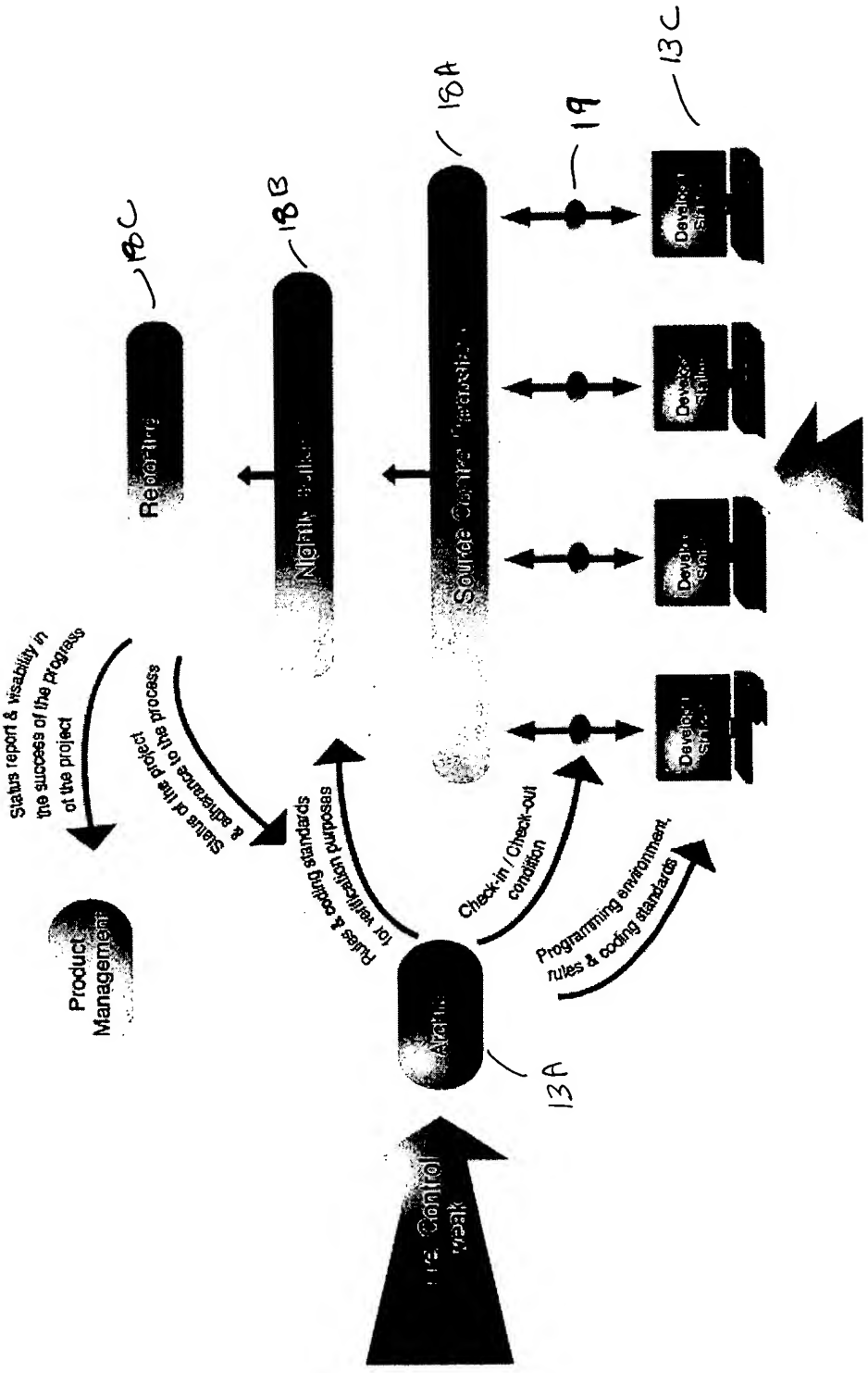

18C
18B
16A
19
13C
Status report & visability in the success of the progress of the project
Status of the project & advisories to the process
Rules & coding standards for verification purposes
Check-in / Check-out condition
Programming environment, rules & coding standards
Product Management
13A

Fig. 1C

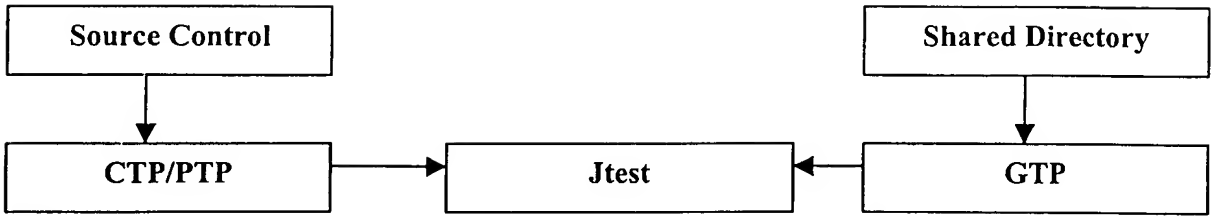

Source Control
Shared Directory
CTP/PTP
Jtest
GTP

Fig 2A

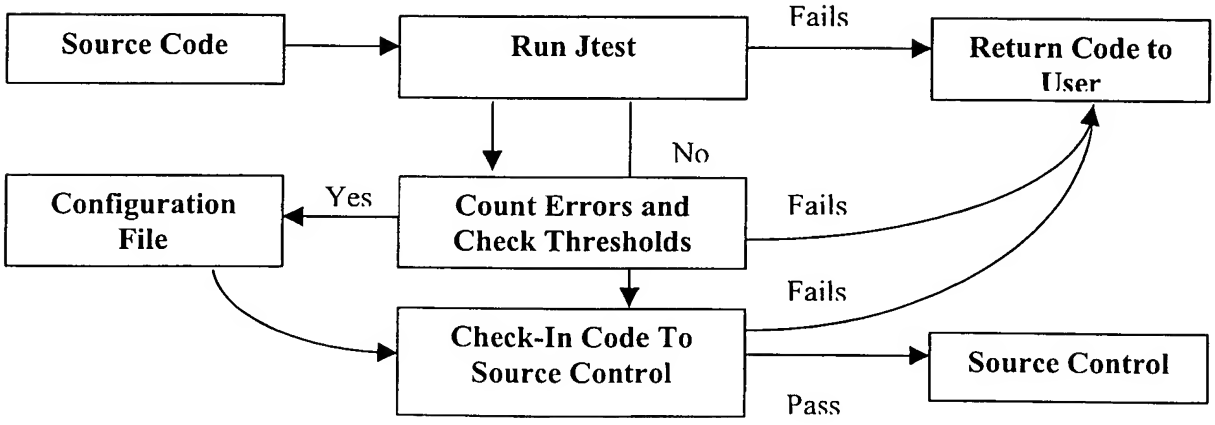

Source Code
Run Jtest
Fails
Return Code to User
No
Configuration File
Yes
Count Errors and Check Thresholds
Fails
Fails
Check-In Code To Source Control
Source Control
Pass

Fig. 2B

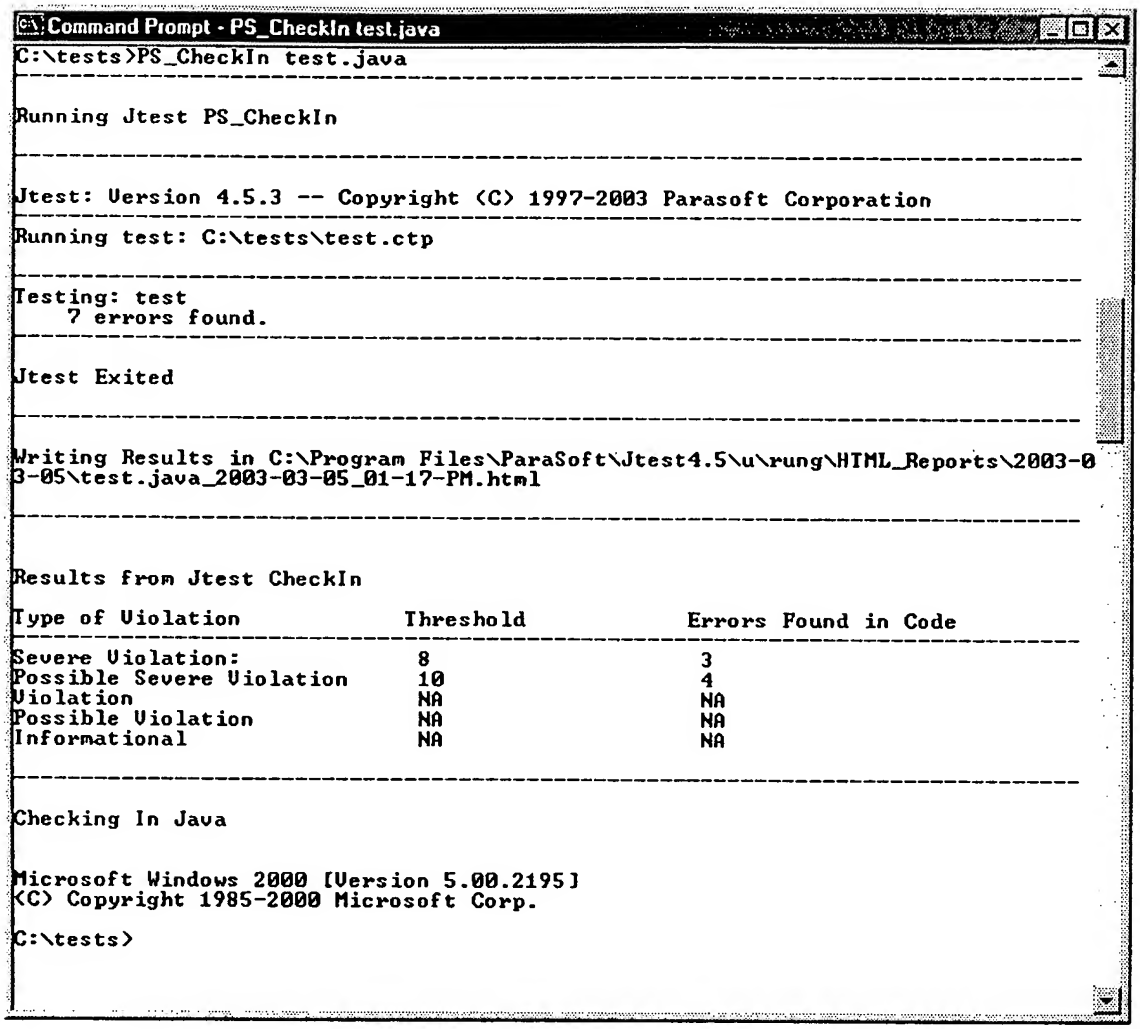

Command Prompt - PS_CheckIn test.java
C:\tests>PS_CheckIn test.java
Running Jtest PS_CheckIn
Jtest: Version 4.5.3 -- Copyright (C) 1997-2003 Parasoft Corporation
Running test: C:\tests\test.ctp
Testing: test
7 errors found.
Jtest Exited
Writing Results in C:\Program Files\ParaSoft\Jtest4.5\u\rung\HTML_Reports\2003-03-05\test.java_2003-03-05_01-17-PM.html
Results from Jtest CheckIn
Type of Violation Threshold Errors Found in Code
Severe Violation: 8 3
Possible Severe Violation 10 4
Violation NA NA
Possible Violation NA NA
Informational NA NA
Checking In Java
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.
C:\tests>

Fig. 2C

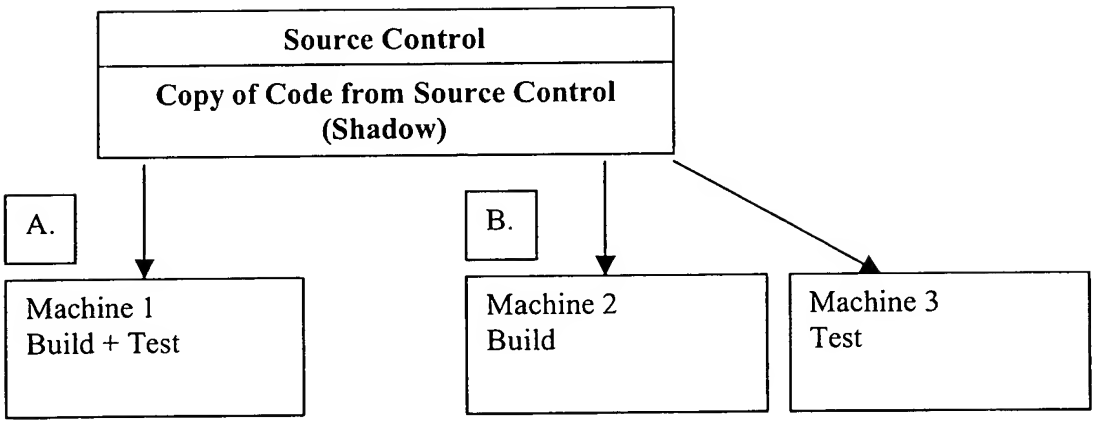

Source Control
Copy of Code from Source Control (Shadow)
A.
B.
Machine 1
Build + Test
Machine 2
Build
Machine 3
Test

Fig. 2D

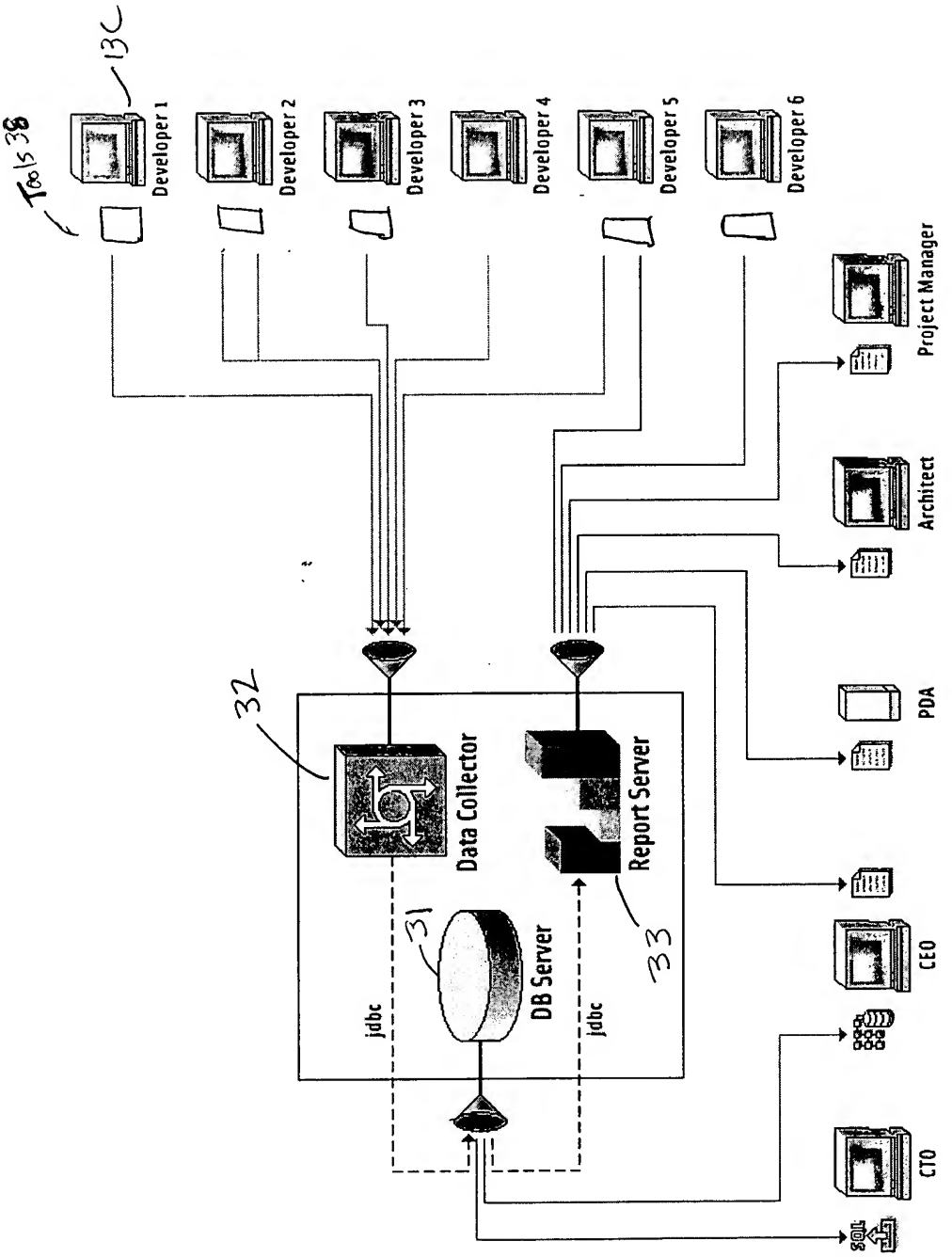

13C
Tools 38
Developer 1
Developer 2
Developer 3
Developer 4
Developer 5
Developer 6
Project Manager
Architect
PDA
CEO
CTO
SQL
32
Data Collector
Report Server
31
DB Server
33
jdbc
jdbc

Fig. 3A

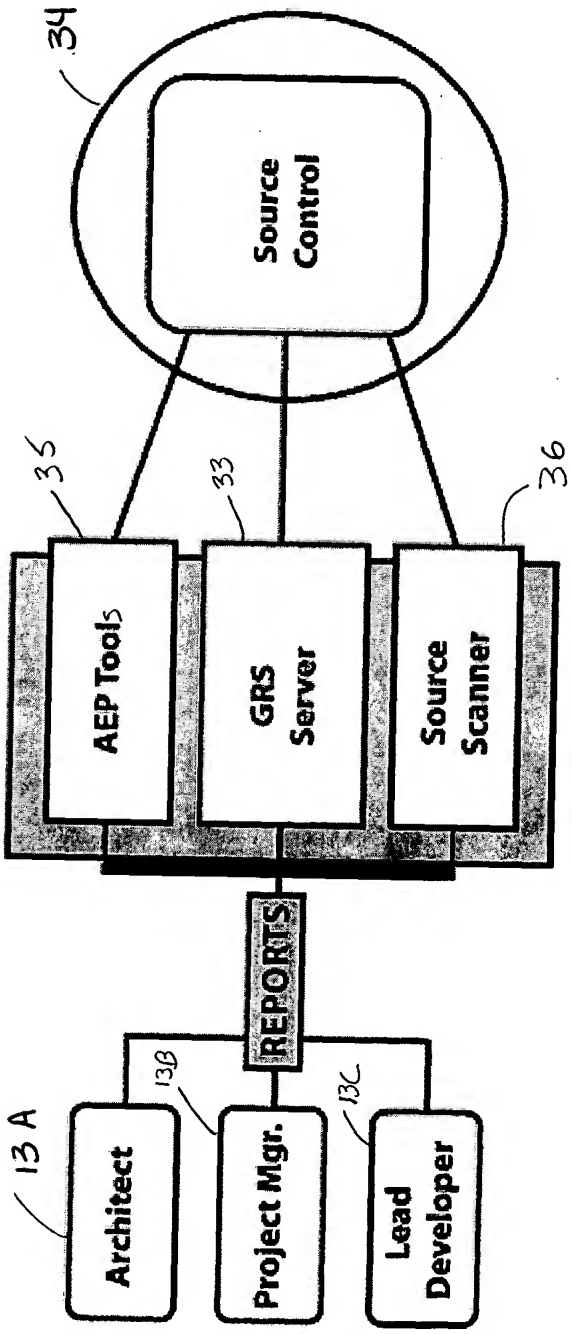

34
Source Control
35
33
36
AEP Tools
GRS Server
Source Scanner
REPORTS
13A
13B
13C
Architect
Project Mgr.
Lead Developer

Fig. 3B

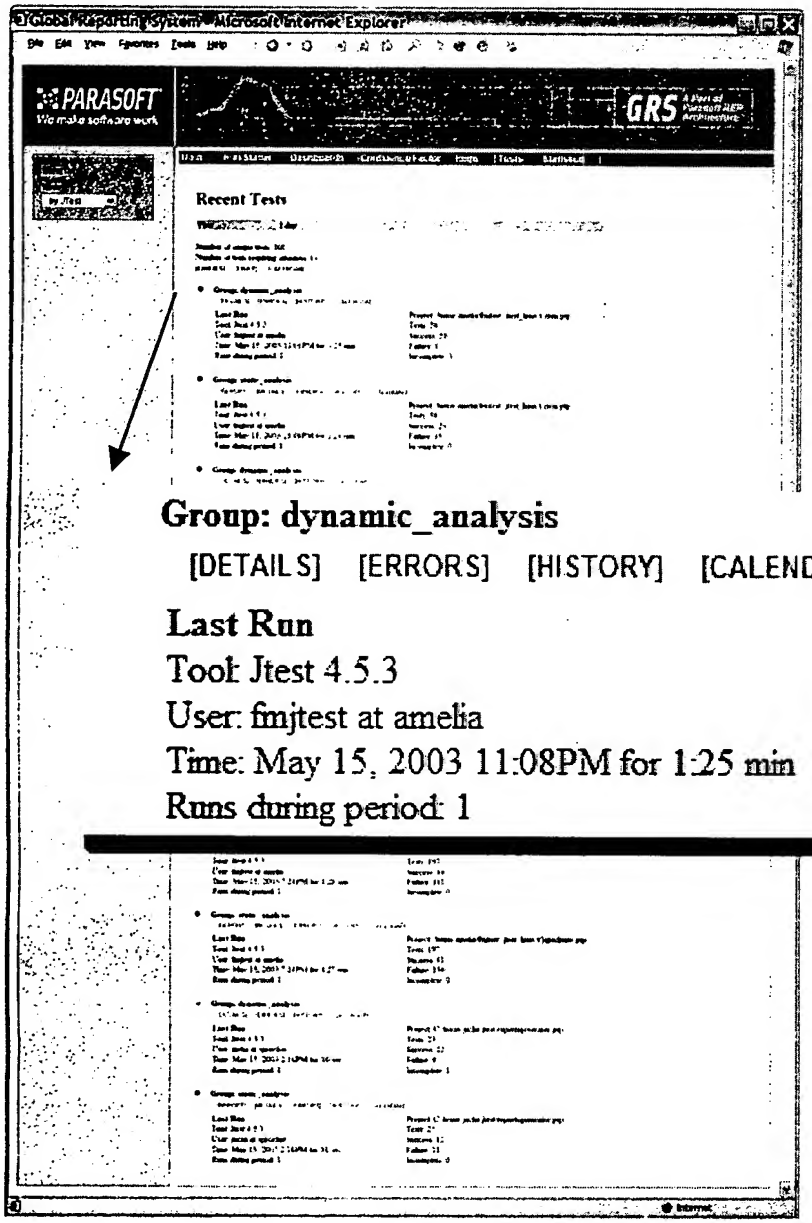



Fig. 4A

**Group: dynamic_analysis**

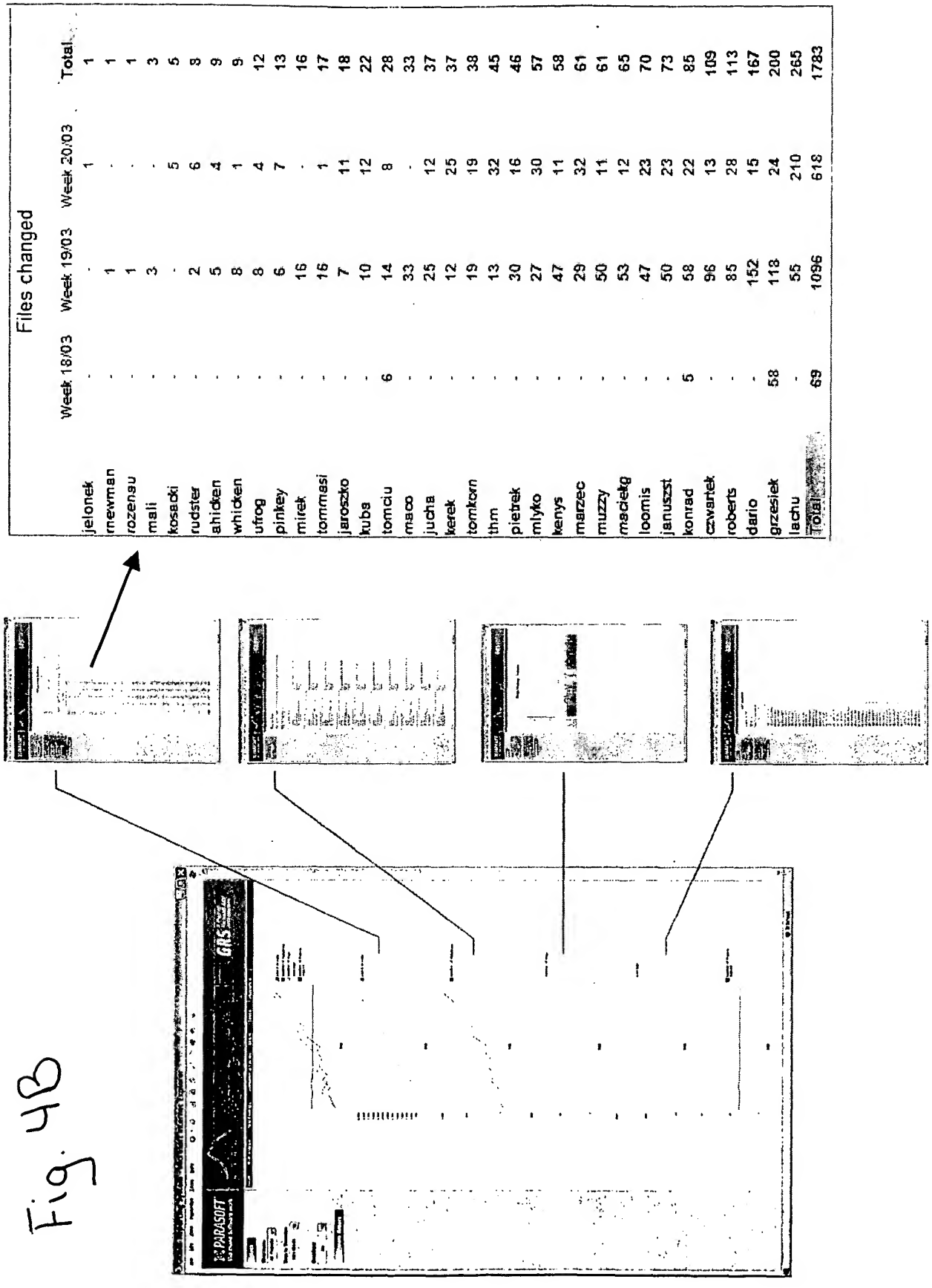
[DETAILS] [ERRORS] [HISTORY] [CALENDAR]

**Last Run**

Tool: Jtest 4.5.3
User: fmjtest at amelia
Time: May 15, 2003 11:08PM for 1:25 min
Runs during period: 1

Project: /home/amelia/fmjtest/.jtest_linux/t/cron.ptp
Tests: 58
Success: 50
Failure: 8
Incomplete: 0

Attorney: Raymond R. Tabandeh
Docket No.: 50283/RRT/P396
Inventor(s): Adam K. Kolawa
Title: METHOD AND SYSTEM FOR AUTOMATIC ERROR PREVENTION FOR COMPUTER...
Sheet 9 of 11



Files changed

| | Week 18/03 | Week 19/03 | Week 20/03 | Total |
|---|---|---|---|---|
| jelonek | - | - | 1 | 1 |
| mewman | - | 1 | - | 1 |
| rozensu | - | 1 | - | 1 |
| mali | - | 3 | - | 3 |
| kosacki | - | - | 5 | 5 |
| rudster | - | 2 | 6 | 8 |
| ahicken | - | 5 | 4 | 9 |
| whicken | - | 8 | 1 | 9 |
| ufrog | - | 8 | 4 | 12 |
| pinkey | - | 6 | 7 | 13 |
| mirek | - | 16 | - | 16 |
| tommasi | - | 16 | 1 | 17 |
| jaroszko | - | 7 | 11 | 18 |
| kubs | - | 10 | 12 | 22 |
| tomciu | 6 | 14 | 8 | 28 |
| maco | - | 33 | - | 33 |
| jucha | - | 25 | 12 | 37 |
| kerek | - | 12 | 25 | 37 |
| tomkorn | - | 19 | 19 | 38 |
| thm | - | 13 | 32 | 45 |
| pietrek | - | 30 | 16 | 46 |
| mlyko | - | 27 | 30 | 57 |
| kenys | - | 47 | 11 | 58 |
| marzec | - | 29 | 32 | 61 |
| muzzy | - | 50 | 11 | 61 |
| maciekg | - | 53 | 12 | 65 |
| loomis | - | 47 | 23 | 70 |
| januszst | - | 50 | 23 | 73 |
| konrad | 5 | 58 | 22 | 85 |
| czwartek | - | 96 | 13 | 109 |
| roberts | - | 85 | 28 | 113 |
| dario | - | 152 | 15 | 167 |
| grzesiek | 58 | 118 | 24 | 200 |
| lachu | - | 55 | 210 | 265 |
| Total | 69 | 1096 | 618 | 1783 |

Fig. 4B

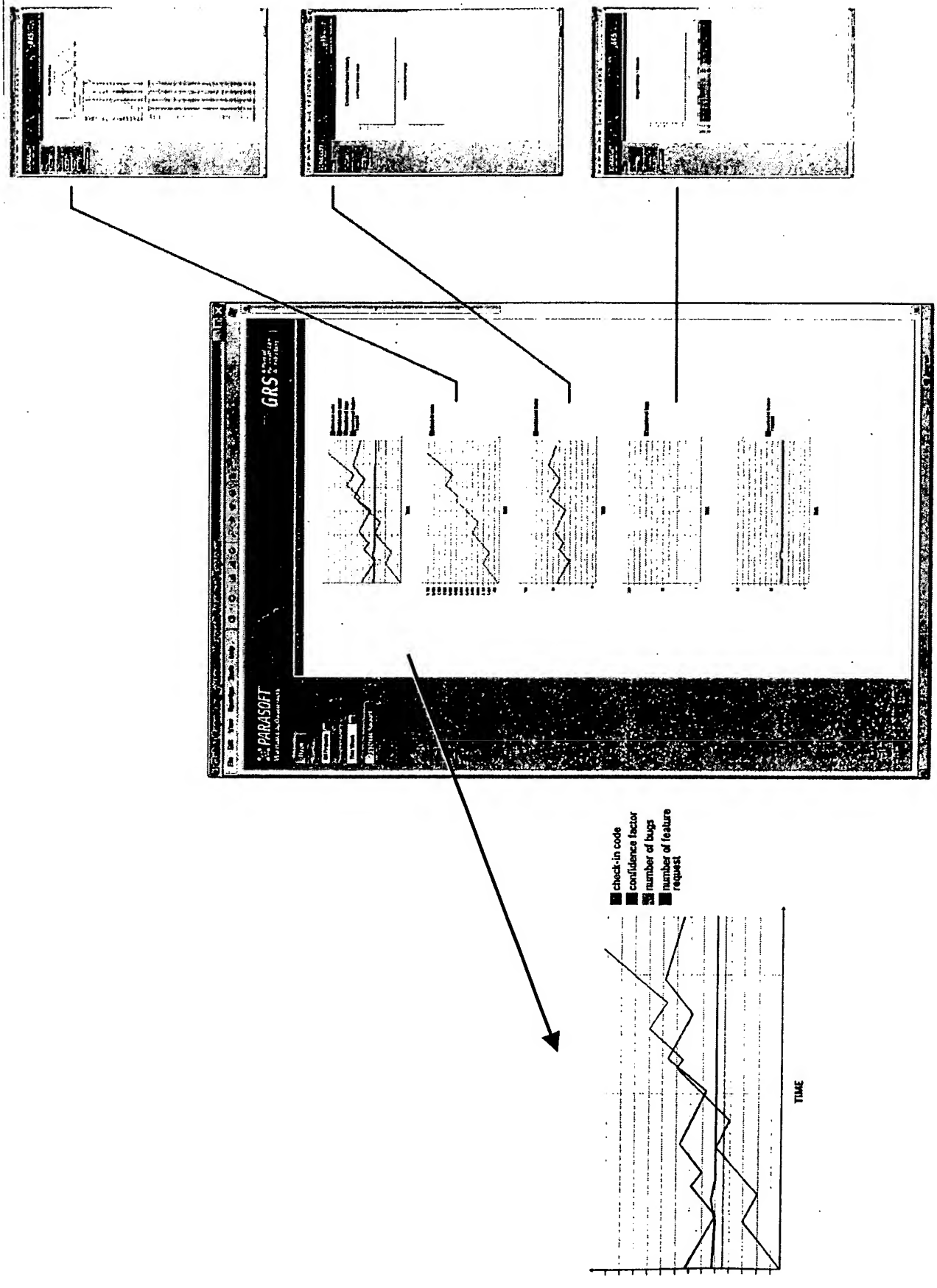

GRS
PARASOFT
check-in code
confidence factor
number of bugs
number of feature request
TIME

Fig. 4C